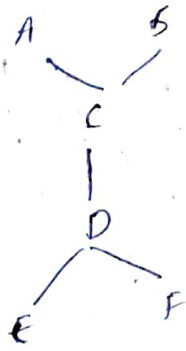
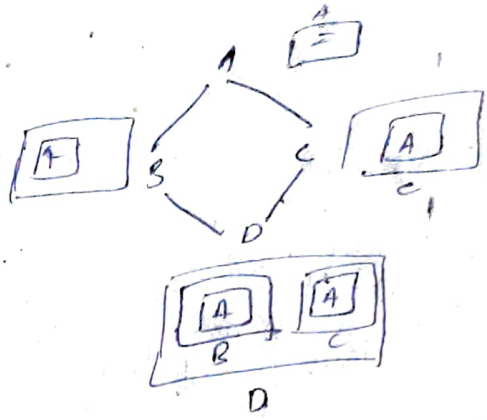
6) Hybrid Inheritance

5th type of Inheritance : Hybrid Inheritance

pto

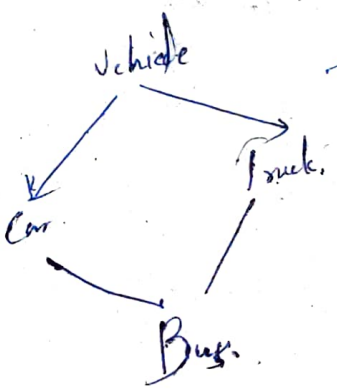
Ex:





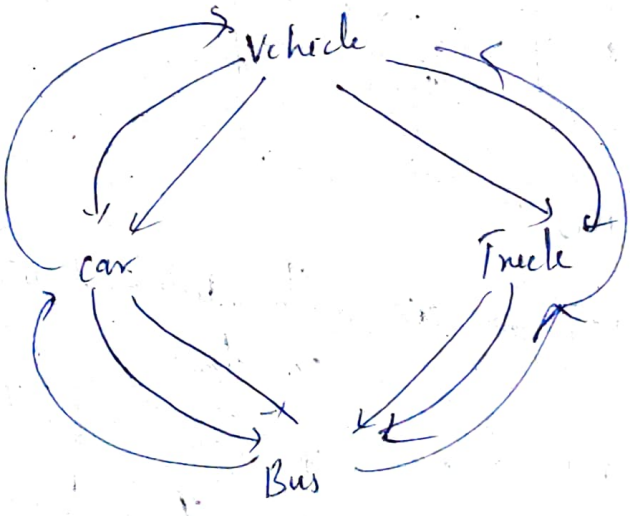
→ we got two copies of A in D, which creates ambiguity

Ex:



Diamond Problem
well known problem
in Inheritance

Constructor calling sequence

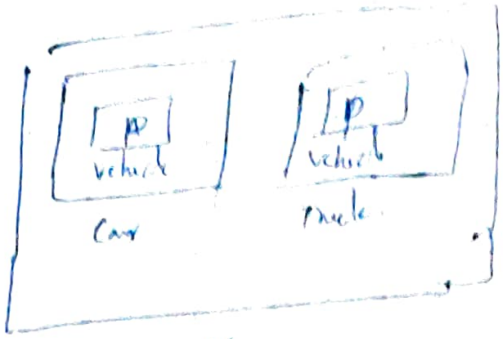


1. Vehicle()
2. Car()
3. Vehicle()
4. Truck()
5. Bus()

Bus b;

b.print()

First b checks print() in Bus class, If not found it checks in parent class



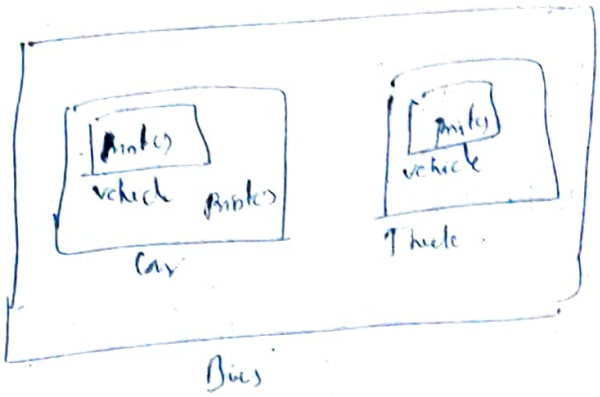
But in this case, we have ambiguity

To solve this we can add class name

⇒ b.Car::print() → ✓

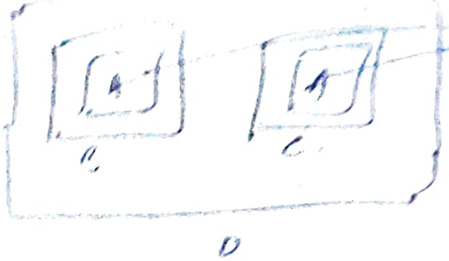
↓ It works

Same this case



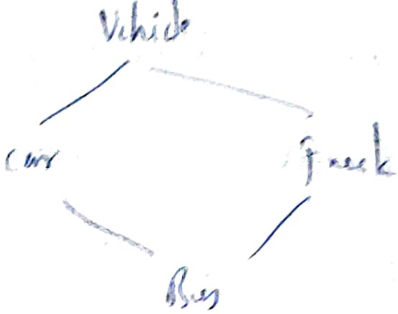
*) b.car::print() → calls print which is defined in car class

*) b.Truck::print() → calls print which is defined in vehicle in Truck class.

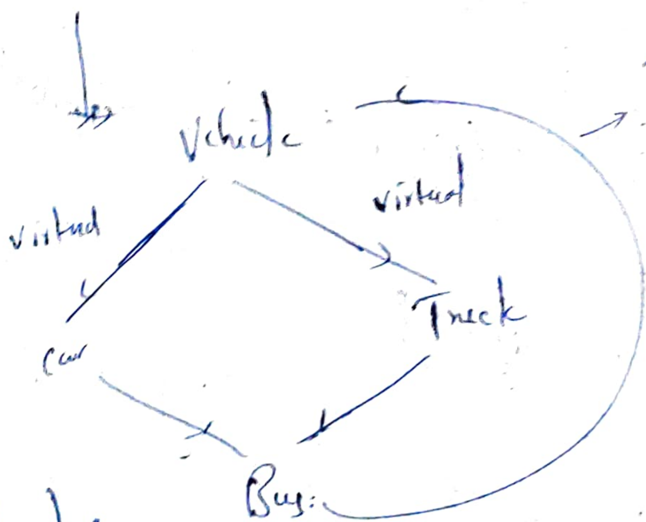


There are two classes of A which makes ambiguity

To remove ambiguity (two copies) → But we need to one copy to avoid ambiguity → By adding keyword called <u>Virtual</u>.




```
Class car : virtual public Vehicle {
};
class Truck : virtual public Vehicle{
};
```



→ This is also known as <u>virtual Inheritance</u>

Bus b;

vehicle() →
car()
Truck()
Bus()

Now avoid calling of vehicle constructor two times Because we are using virtual class of car & Truck.